REMARKS

In view of the following remarks, the Examiner is requested to withdraw the rejections and allow the Claims 1-30, the only claims pending and currently under examination in this application.

Claim 2 is amended to correct a syntactical and typographical error respectively. Claims 14-16 are amended to correctly make these claims method claims. Claim 21 is amended to include the structural limitation that depot member is covered on one side with a plastic or elastic film. Support for the amendment to Claim 21 is found at p. 8, line14-15. As such, no new material is added by way of these amendments.

35 USC § 102

Claims 1-5, 10-14, 16-27, and 29 were rejected under 35 U.S.C. § 102(e) as being anticipated by Bjornson et al. US 6,284,113.

An element of Claim 1 in the present case is a method for transferring liquids from a plurality of wells having openings arranged in a selected format to at least one receptacle, comprising displacing liquid in each well so that a convex meniscus swells from the opening.

The Examiner alleges that Bjornson et al. teach that an apparatus 50 is inverted so that each of the apertures 30 fills with liquid. The Examiner then alleges that a meniscus 60 is formed at opening 34.

However, Bjornson et al. does not teach displacing liquid in each well so that a convex meniscus swells from the opening.

As claimed, the formation of a meniscus by displacing liquid in each well is an active process. The meniscus in the present case forms as a result of a displacing fluid forcing the liquid in each well out of the well.

As claimed, the formation of a meniscus by displacing liquid in each well is an active process. The meniscus in the present case forms as a result of a displacing fluid forcing the liquid in each well out of the well.

In contrast, the formation of a meniscus by inverting an apparatus is a passive process. Bjornson et al. states at column 5, line 46-50: "The multiwell plate is attached to the second plate and the assembly is inverted so that liquid is disposed at each of the apertures. The dimensions and surface properties of the apertures are such that liquid does not exit the apertures under gravity conditions." Bjornson et al. also state at column 15, line 65 to column 16, line 16: "Once device 100 is attached to multiwell plate 54, the resulting apparatus 50 is inverted so that each of the apertures 30 fills with liquid. A meniscus 60 is formed at opening 34." As such, the formation of the meniscus at aperture 34 is a function of the dimensions and surface properties of the apertures. The formation of the meniscus at aperture 34 is not the result of actively displacing the liquid in multiwell plate 54 with a displacing fluid, as claimed.

As such, Bjornson et al. fail to teach the element of Claim 1, or any of the claims dependent thereon, regarding displacing liquid in each well so that a convex meniscus swells from the opening.

An element of Claim 21 in the present case is an apparatus for transferring a plurality of liquids, comprising a depot member having a plurality of wells each having a first end and an opening at a second end, wherein said depot member is covered on one side with a plastic or elastic film.

Bjornson et al. does not teach that a film covers the wells, whence the liquid is transferred from said wells, during use. The figures of Bjornson et al. illustrate wells that are either open at both ends or where one end is capped by a multiwell plate 54. Multiwell plate 54 is not a film. Bjornson et al. does not teach a film covering a plurality of wells as claimed. As such, Bjornson et al. does not teach the above-listed structural element of Claim 21

An element of Claim 29 in the present case is a depot member comprising a plate with a plurality of wells each having a first end and an opening at a second end, wherein each well includes a deformable wall portion at the first end.

The Examiner alleges that Bjornson et al. teach: "In the case of typical piezoelectric activation, picoliter to nanoliter droplets can be delivered at 1 kHz frequencies by cycling the deformation of a piezoelectric material via voltage modulation. Recent advances in high-frequency printing mechanisms have made it possible to deliver such droplets at 50 kHz frequencies by using a piezoelectric element to vibrate a microfabricated cantilever beam with a tip that is in fluid communication with a liquid reservoir." The quoted portion of the office action is a direct quote from Bjornson et al. which is found at column 10, lines 23-32.

However, the above quote citation does not demonstrate that Bjornson et al. teach that each well includes a deformable wall portion at the first end. The piezoelectric element that vibrates a microfabricated cantilever beam in Bjornson et al. is not a structure element of the wall of each well. The Examiner has only identified the vibrating cantilever as a deformable structure. Since the vibrating cantilever is not a portion of the well wall, Bjornson et al. fail to teach this element of Claim 29.

Because Bjornson et al. fail to teach the above-listed elements of Claims 1, 21, and 29, Applicants respectfully request that the rejection of Claims 1, 21, and 29 under 35 U.S.C. § 102 (e) be withdrawn.

Claim Rejections - 35 USC § 102(e)

Claims 29-30 were rejected under 35 U.S.C. 102(e) as being anticipated by Madden et al. (US 6,783,732).

An element of Claim 29 is a depot member comprising a plate with a plurality of wells each having a first end and an opening at a second end, wherein each well includes a deformable wall portion at the first end.

The Examiner has not identified where it is taught in Madden et al. that each well includes a deformable wall portion at the first end. The device depicted in Figure 2 of Madden et al. does not include wells with a deformable wall portion. Madden et al. are silent with respect to the deformation of a well wall during the operation of the device depicted in Figure 2.

Figure 2 of Madden et al. is as follows:

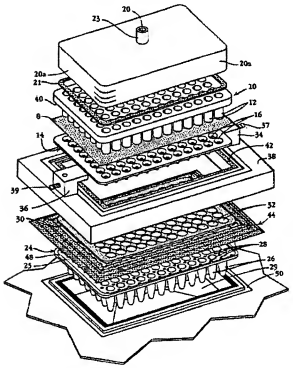


Fig. 2

As such, Madden et al. fail to teach the above listed element of Claim 29.

An element of Claim 30 is a depot member comprising a plate with a plurality of wells each having an opening and a vent positioned away from the opening wherein the vent is covered by a membrane that is permeable to a displacing fluid.

The Examiner alleges that Madden et al. disclose a multiwell arrangement and in one embodiment, the vacuum pathways pass through the plane of the collection-tray upper surface by way of vents that traverse the collection tray proximate each of said collection well (according to column 6, line 35+). However, the vent of Madden et al. is position in the collection-tray and not associated with each well, whence the liquid is disposed before being transferred to the collection-tray. Furthermore, the vacuum pathways of Madden et al. do not teach a vent covered by a membrane that is permeable to a displacing fluid. In addition, the vent of Madden et al. is designed to create a negative pressure and not designed for the introduction of a displacing fluid into the well containing the liquid to be transferred. The vent covered by a membrane in the present case allows for the passage of a displacing fluid. Madden et al. do not teach a vent is covered by a membrane as claimed in the present case.

As such, Madden et al. fail to teach the above-listed element of Claim 30.

Applicants respectfully request the rejection of Claims 29-30 under 35 U.S.C. § 102(e) be withdrawn.

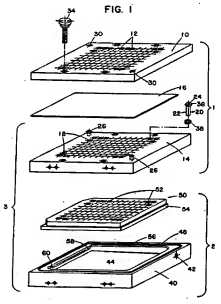
Claim Rejections - 35 USC § 102 (b)

Claims 29-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Clark (US 5,219,528).

An element of Claim 29 is a depot member comprising a plate with a plurality of wells each having a first end and an opening at a second end, wherein each well includes a deformable wall portion at the first end.

The Examiner has not identified where it is taught in Clark that each well includes a deformable wall portion at the first end. The device depicted in Figure 1 of Clark does not include wells with a deformable wall portion.

Figure 1 of Clark is as follows:



As such, Clark fails to teach the element of Claim 29 that each well includes a deformable wall portion at the first end.

An element of Claim 30 is a depot member comprising a plate with a plurality of wells each having an opening and a vent positioned away from the opening wherein the vent is covered by a membrane that is permeable to a displacing fluid.

The Examiner alleges that Clark teaches that when a liquid is placed in the holes in the top plate and a vacuum is created in the chamber, the liquid is drawn at a controlled rate into the chamber. However, the Examiner has not identified where it is taught in Clark that the vent is covered by a membrane that is permeable to a displacing fluid. The vent of Clark is illustrated by diagram element 42 in Figure 1. The liquid permeable membrane of Clark is illustrated by diagram element 16. As evidenced by Figure 1 of Clark, the liquid permeable membrane does not cover the vent.

As such, Clark fails to teach the element of Claim 30 that a depot member comprising a plate with a plurality of wells each having an opening and a vent

positioned away from the opening wherein the vent is covered by a membrane that is permeable to a displacing fluid.

Applicants respectfully request the rejection of Claims 29-30 under 35 U.S.C. § 102(b) be withdrawn.

Claim Rejection – 35 USC § 103 (a)

Claims 6-9 and 28 were rejected under 35 U.S.C. 103 (a) as being unpatentable over Bjornson et al. as applied to Claims 1-5, 10-14, 16-27 and 29, and in further view of Madden et al.

As stated above, Bjornson et al. fail to teach the element of the Claim 1 listed above regarding displacing liquid in each well such that a convex meniscus swells from the opening.

Bjornson et al. also fail to suggest the above-listed element of Claim 1. Bjornson et al. explicitly states that the meniscus is not formed by an active process, let alone a process akin to the introduction of a displacing fluid as claimed. Bjornson et al. state that "the liquid may simply form a meniscus at the opening of the aperture." (Column 12, lines 24-25). According to the present case, the meniscus is not simply formed in each well. Rather, the meniscus in the present case is formed by the introduction of a displacing fluid that forces liquid out of the well.

As such, Bjornson et al. fail to teach or suggest the element of Claim 1 regarding a method for transferring liquids from a plurality of wells having openings arranged in a selected format to at least one receptacle, comprising displacing liquid in each well so that a convex meniscus swells from the opening.

An element of Claim 28 is a depot having a plurality of wells, wherein each well comprises a vent positioned away from the opening, and the liquid-displacing means

comprise means for introducing a displacing fluid through the vents and into the wells; wherein the vent is covered by a membrane that is permeable to the displacing fluid.

The Examiner has not identified where it is taught in Bjornson et al. that each well comprises a vent positioned away from the opening covered by a membrane that is permeable to the displacing fluid. Bjornson et al. is silent with respect to a vent covered by a membrane permeable to the displacing fluid. As such, Bjornson et al. fail to teach this element of Claim 28.

Furthermore, Bjornson et al. fail to suggest this element of Claim 28. Bjornson et al. is silent with respect to a vent covered by a membrane permeable to the displacing fluid. Additionally, Bjornson et al. states in the abstract "to simultaneously expel liquid from the apertures, the apertures are electrically activated." Bjornson et al. does not mention the structural element of a vent in relation to the apertures, whence the liquid originates before being transferred.

As argued above with regard to Claim 30, Madden et al. also fail to teach the element of a vent covered by a membrane permeable to a displacing fluid.

Madden et al. was cited solely for disclosing a multiwell arrangement and in one embodiment, that the vacuum pathways pass through the plane of the collection-tray upper surface by way of the vents that traverse the collection tray proximate each of said collection wells (according to column 6, line 35+). However, the vent described by Madden is quite different from the vent in the present case. Madden et al. is silent with respect to a membrane covering the vent, let alone a membrane permeable to a displacing fluid. Furthermore, the vent of Madden et al. is designed to create a negative pressure. A vent designed to create a negative pressure in not suggestive of a vent designed to allow passage of a displacing fluid that would positively force liquid from the depot having a plurality of wells.

As such, Madden et al. also fail to teach or suggest the element of Claim 28 regarding a depot having a plurality of wells, wherein each well comprises a vent positioned away from the opening, and the liquid-displacing means comprise means for introducing a displacing fluid through the vents and into the wells; wherein the vent is covered by a membrane that is permeable to the displacing fluid.

Because Madden et al. fail to make up for the fundamental deficiency between Bjornson et al. and the invention in the present case, Bjornson et al. in view of Madden et al. fail to teach or suggest the above identified elements of Claim 1 and 28.

As such, Applicants respectfully request that the rejection of Claims 6-9, which depend from Claim 1, and Claim 28 under 35 U.S.C 103 (a) be withdrawn.

Claim Rejection – 35 USC § 103 (a)

Claim 15 was rejected under 35 U.S.C § 103 (a) as being unpatentable over Bjornson et al. as applied to Claims 1-5, 10-14, 16-27, and 29, and further in view of Churchill et al.

As stated above, Bjornson et al. fail to teach or suggest the element of Claim 1 regarding a method for transferring liquids from a plurality of wells having openings arranged in a selected format to at least one receptacle, comprising displacing liquid in each well so that a convex meniscus swells from the opening.

Because Churchill et al. was cited solely for disclosing that other types of dispensers and valve actuation devices exist and may be used, Churchill et al. fail to make up for the fundamental deficiency between Bjornson et al. and the invention in the present case.

Because Churchill et al. fail to make up for the fundamental deficiency between Bjornson et al. and the invention in the present case, Bjornson et al. in view of Churchill

et. al. fail to teach or suggest the element of Claim 1 regarding a method for transferring liquids from a plurality of wells having openings arranged in a selected format to at least one receptacle, comprising displacing liquid in each well so that a convex meniscus swells from the opening.

As such, Applicants respectfully request that the rejection of Claim 15, which depends from Claim 1, under 35 U.S.C. § 103(a) be withdrawn.

Conclusion

In view of the amendments and remarks above, the Applicants respectfully submit all of the claims are in condition for allowance, which action is requested. If the Examiner finds that a telephone conference would expedite the prosecution of this application, please telephone Bret Field at (650) 327-3400.

The Commissioner is hereby authorized to charge any fees under 37 C.F.R. §§ 1.16 and 1.17 which may be required by this paper, or to credit any overpayment, to Deposit Account No. 50-1078.

Respectfully submitted,

Date: August 3, 2007

By: _____
Bret Field
Registration No. 37,620

Agilent Technologies, Inc.
Legal Department, DL429
Intellectual Property Administration
P.O. Box 7599
Loveland, CO 80537-0599